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DATE: May 17, 2013

TO: Jeff Catanzarita, U.S. EPA/ERT

THROUGH: Dennis Miller, SERAS Program Manager *Dennis Miller*

FROM: Philip Solinski, SERAS Task Leader *Philip Solinski*

SUBJECT: CABO ROJO SITE, CABO ROJO, PUERTO RICO
MARCH 2013 SUB-SLAB SOIL GAS AND INDOOR AIR SAMPLING
WORK ASSIGNMENT #SER00130 – FINAL TRIP REPORT

This trip report contains confidential information as to locations and analytical results of private properties involved in the investigation, and therefore, specific information identifying property locations and results may need to be withheld or redacted prior to release to the public.

BACKGROUND

The Cabo Rojo Site (Site) consists of a groundwater plume that has impacted several public drinking water supply wells in and around the municipality of Cabo Rojo, Puerto Rico (PR). The source of the plume has not been identified. Samples collected by the Puerto Rico Aqueduct and Sewer Authority (PRASA) from 2002 to 2006 have identified the presence of tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (DCE) and 1,1-DCE within the Cabo Rojo Urbano System, particularly in the Ana Maria well. EPA confirmed the presence of these contaminants in the Ana Maria well in 2007, and began site reconnaissance activities that included 68 facilities in and around Cabo Rojo. Preliminary Assessment/Site Inspections (PA/SI) were completed at fifteen facilities, 13 of which included soil and groundwater sampling. Although the source of the groundwater contamination was not specifically identified, contamination was detected at D'Elegant Fantastic Dry Cleaners (DEC), Extasy Q Prints (EQP), and Cabo Rojo Professional Dry Cleaners (CRPDC). The Site was listed on the National Priorities List (NPL) on March 10, 2011 (US EPA 2012).

In June 2011, at the request of the Environmental Protection Agency/Environmental Response Team (EPA/ERT) and EPA Region II, Scientific, Engineering, Response and Analytical Services (SERAS) personnel conducted a preliminary remedial investigation (RI) of the Site to confirm or negate possible sources of groundwater contamination based on previous EPA findings and/or suspected sources of contaminants. The analytical results from the preliminary RI indicated that there are measurable levels of PCE, TCE, and DCE at four of the 13 Site properties included in the investigation.

In February and March 2012, SERAS was tasked by the EPA/ERT and EPA Region II to return to the Site to conduct a soil vapor intrusion sampling study at several Site properties that were included in the preliminary RI. The Site properties included DEC, CRPDC, EQP, and Serrano Dry Cleaners II (S2A and S2B) and 32 additional Site properties.

In March 2013, SERAS was tasked by the EPA/ERT and EPA Region II to return to the Site to re-sample select areas at the EQP building and extend the soil vapor intrusion sampling study to two additional buildings.

This trip report details the tasks and results associated with the March 2013 mobilization.

OBSERVATIONS AND ACTIVITIES

During the week of March 18, 2013, SERAS personnel mobilized to the Site to install additional sub-slab soil gas wells within the interior of two civic Site buildings. However, only one of the additional two buildings was on a slab, the other building had a soil crawl space beneath the usable space. Samples were collected from the Santa Maria Head Start (SMHS) [two sub-slab, 3 indoor air and one ambient], Santa Rita Head Start (SRHS) [two sub-slab, two indoor air and one ambient] and a building under construction near Rebekah Colberg Stadium (RC) [three crawl space and one indoor air]. Note that the SMHS was sampled as the EQP building in 2012 and that the sample location names were re-used for comparative purposes. All samples were collected using SUMMA® canisters over a 24-hour sampling period.

All SUMMA® canisters and orifices provided by the laboratory were individually certified clean at 0.030 parts per billion by volume (ppbv). The SUMMA® canisters were submitted, with appropriate chain of custody (COC) records, to the ALS Laboratory for EPA Method Toxic Organic (TO-15), *Determination of Volatile Organic Compounds (VOCs) in Air Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)*. A total of four soil gas, three crawl space, six indoor air, two ambient air and one trip blank samples were submitted for VOC analysis.

The target compound list (TCL) for samples collected was a 36-compound subset of the TO-15 list. Reporting limits (RLs) were set at 0.030 ppbv, and sample results were reported in both ppbv and micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

RESULTS

Table 1 presents a summary of the PCE and TCE results from the March 2013 sampling event. Table 2 presents a comparison of the PCE and TCE results from locations collected from both the March 2012 and March 2013 sampling events.

Complete analytical results for the March 2013 sampling mobilizations can be found in Appendix A. Appendix B contains the SERAS Air Sampling Worksheets. Appendix C contains the confidential unit to address key.

FUTURE ACTIVITIES

Future activities will be determined by ERT and EPA Region II personnel.

cc: Central File WA SERAS-130 (w/attachments)
 Electronic File: I:\Archive\SERAS\130\D\TR\SERAS-DTR-051713
 Dennis Miller, SERAS Program Manager (cover page only)

TABLES
Cabo Rojo Site
Cabo Rojo, PR
May 2013

Table 1
 Tetrachloroethene and Trichloroethene Results from March 2013
 Cabo Rojo Site
 Cabo Rojo, Puerto Rico
 May 2013

Sample Number	Location	Tetrachloroethene		Trichloroethene	
		ppbv	ug/m ³	ppbv	ug/m ³
0-130-1182	EQP-Amb4	0.0060 U	0.041 U	0.0075 U	0.041 U
0-130-1180	EQP-IA1	0.064	0.44	0.0099	0.053
0-130-1181	EQP-IA4	0.026 J	0.17 J	0.0076 U	0.041 U
0-130-1177	EQP-IA5	0.017 J	0.12 J	0.0074 U	0.040 U
0-130-1179	EQP-SS1	470	3200	21	110
0-130-1178	EQP-SS6	510	3500	1.0 U	5.4 U
0-130-1188	RC-CS1	0.0080	0.055 J	0.0079 U	0.042 U
0-130-1190	RC-CS2	0.0063 U	0.043 U	0.0080 U	0.043 U
0-130-1191	RC-CS3	0.010 J	0.068 J	0.0080 U	0.043 U
0-130-1189	RC-IA1	0.016 U	0.11 U	0.021 U	0.11 U
0-130-1187	SRHS-Amb	0.0064 U	0.043 U	0.0081 U	0.043 U
0-130-1185	SRHS-IA1	0.0065 U	0.044 U	0.010	0.054
0-130-1186	SRHS-IA2	0.0064 U	0.043 U	0.0081 U	0.043 U
0-130-1183	SRHS-SS1	0.039	0.26	0.048 U	0.26 U
0-130-1184	SRHS-SS2	0.047	0.32	0.017 U	0.093 U

ppbv - parts per billion by volume

ug/m³ - micrograms per cubic meter

U - not detected above the reporting limit listed

J - value is estimated

Table 2
 Comparison of Tetrachloroethene and Trichloroethene Results from March 2012 and March 2013
 Cabo Rojo Site
 Cabo Rojo, Puerto Rico
 May 2013

Location	Tetrachloroethene				Trichloroethene			
	2/27/2012	3/22/2013	2/27/2012	3/22/2013	2/27/2012	3/22/2013	2/27/2012	3/22/2013
	ppbv		ug/m ³		ppbv		ug/m ³	
EQP-AMB4	0.0698 U	0.006 U	0.473 U	0.041 U	0.0698 U	0.0075 U	0.375 U	0.041 U
EQP-IA1	0.0891	0.064	0.604	0.44	0.0698 U	0.0099	0.375 U	0.053
EQP-IA1 colo	0.11	NS	0.749	NS	0.0698 U	NS	0.375 U	NS
EQP-IA4	0.0698 U	0.026 J	0.473 U	0.17 J	0.0698 U	0.0076 U	0.375 U	0.041 U
EQP-IA5	0.0698 U	0.017 J	0.473 U	0.12 J	0.0698 U	0.0074 U	0.375 U	0.040 U
EQP-SS1	1080	470	7340	3200	19.5	21	105	110
EQP-SS6	841	510	5710	3500	0.157	1 U	0.843	5.4 U

ppbv - parts per billion by volume

ug/m³ - micrograms per cubic meter

U - not detected above the reporting limit listed

NS- not sampled

J - value is estimated

APPENDIX A
SUMMA[®] Canister Analytical Report
Cabo Rojo Site
Cabo Rojo, PR
May 2013

ANALYTICAL REPORT

Prepared by
Lockheed Martin Information Systems and Global Services/Environmental Services
Scientific, Engineering, Response and Analytical Services

Cabo Rojo Site
Puerto Rico

April 2013

EPA Work Assignment No. SERAS-130
LOCKHEED MARTIN Work Order SER00130
EPA Contract No. EP-W-09-031

Submitted to
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Y 076

Appendices will be furnished on request.

REPORT OF LABORATORY ANALYSIS
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TESTING LABORATORIES INFORMATION

Analysis of Volatile Organic Compounds in Air by SERAS SOP# 1814, “*Analysis of Volatile Organic Compounds (VOCs) in Air by Gas Chromatography/Mass Spectrometry (GC/MS)*” (EPA Method TO-15)

Columbia Analytical Services/ALS
2655 Park Center Drive
Simi Valley, CA 93065

All analyses were performed according to our NELAP-approved quality assurance program. The test results meet the requirements of the current NELAP standards, where applicable, except as noted in the laboratory case narrative provided. Results are intended to be considered in their entirety and apply only to those analyzed and reported herein.

Columbia Analytical Services is certified by the New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID # CA009 for VOC analysis in air by TO-15.

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Detailed Sample Information

<u>Columbia Sample #</u>	<u>Field Sample #</u>
P1301219-001	0-130-1177
P1301219-002	0-130-1178
P1301219-003	0-130-1179
P1301219-004	0-130-1180
P1301219-005	0-130-1181
P1301219-006	0-130-1182
P1301219-007	0-130-1183
P1301219-008	0-130-1184
P1301219-009	0-130-1185
P1301219-010	0-130-1186
P1301219-011	0-130-1187
P1301219-012	0-130-1188
P1301219-013	0-130-1189
P1301219-014	0-130-1190
P1301219-015	0-130-1191
P1301219-016	0-130-1192

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Introduction

SERAS personnel, in response to WA# SERAS-130, provided analytical support for environmental samples collected from the Cabo Rojo Site in Puerto Rico as described in the following table. The support also included QA/QC, data review and preparation of an analytical report containing analytical and QA/QC results.

The samples analyzed at SERAS were treated with procedures consistent with those specified in SERAS SOP #1008, *Sample Receiving, Handling and Storage*.

Chain of Custody #	Number of Samples	Sampling Date	Date Received	Date Analyzed	Matrix	Analysis/Method	Laboratory	Data Package			
2-032113-152659-0029	2	03/22/13	03/26/13	04/03/13 through 04/04/13	Air	VOC in Air/EPA Method TO-15/SIM	Columbia Analytical Services/ALS	Y 076			
	2				Soil Gas						
2-032113-152834-0030	2				Air						
	2										
2-032113-152904-0031	4										
2-032113-152935-0032	4										

Case Narrative

Sampling was conducted as per the site-specific Quality Assurance Project Plan (QAPP) and analyzed by the analytical methods as stated in the QAPP. The laboratory reported the data to two significant figures. Any other representation of the data is the responsibility of the user. Data were validated using a Stage 4 validation done manually (S4VM) in accordance with the "Guidance for Labeling Externally Validated Data for Superfund Use." All data validation flags have been inserted into the results tables.

VOC in Air Package Y 076

The laboratory reported that the Trip Blank, sample 0-130-1192, was not received under full vacuum indicating that it either leaked during transit or that the valve was opened. The data validator used professional judgment and qualified all sample data with compound results greater than the RL but less than five times the concentrations reported in the trip blank as estimated (J) as detailed in the following table:

Analyte	Samples					
	0-130-1177	0-130-1180	0-130-1181	0-130-1182	0-130-1183	0-130-1184
Chloromethane	J	J	J	J	J	
Bromomethane	J	J	J	J		J
Methylene Chloride	J	J	J	J		J
1,2-Dichloroethane	J	J	J	J		
Benzene	J	J	J	J		
Toluene	J	J	J	J		
Tetrachloroethene	J		J			
Ethylbenzene	J	J	J	J		
m/p-Xylenes	J	J	J	J		
o-Xylene	J		J	J		
1,4-Dichlorobenzene	J		J	J		

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Analyte	Sample					
	0-130-1185	0-130-1186	0-130-1187	0-130-1188	0-130-1189	0-130-1190
Chloromethane				J		
Bromomethane		J	J	J		J
Methylene Chloride	J	J	J	J	J	J
1,2-Dichloroethane				J		
Benzene	J	J	J	J	J	J
Toluene	J	J	J	J	J	J
Tetrachloroethene				J		
Ethylbenzene	J	J	J	J		J
m/p-Xylenes	J	J	J	J	J	J
o-Xylene	J	J	J	J	J	J
1,4-Dichlorobenzene	J	J	J	J		J

	Sample
Analyte	0-130-1191
Chloromethane	J
Bromomethane	J
Methylene Chloride	J
1,2-Dichloroethane	
Benzene	J
Toluene	J
Tetrachloroethene	J
Ethylbenzene	J
m/p-Xylenes	J
o-Xylene	J
1,4-Dichlorobenzene	J

The results presented in this report only relate to the samples analyzed. All results are intended to be considered in their entirety. The Environmental Response Team/Scientific, Engineering, Response and Analytical Services laboratory is not responsible for utilization of less than the complete report.

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Summary of Abbreviations

BFB	Bromofluorobenzene
C	Centigrade
CLP	Contract Laboratory Program
COC	Chain of Custody
conc	concentration
cont	continued
CRDL	Contract Required Detection Limit
CRQL	Contract Required Quantitation Limit
D	(Surrogate Table) value is from a diluted sample and was not calculated
Dioxin	Polychlorinated dibenzo-p-dioxins (PCDD) and Polychlorinated dibenzofurans (PCDF)
DFTPP	Decafluorotriphenylphosphine
EMPC	Estimated maximum possible concentration
GC/MS	Gas Chromatography/ Mass Spectrometry
IS	Internal Standard
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDA	Minimum Detectable Activity
MS (BS)	Matrix Spike (Blank Spike)
MSD (BSD)	Matrix Spike Duplicate (Blank Spike Duplicate)
MW	Molecular Weight
NA	Not Applicable or Not Available
NAD	Normalized Absolute Difference
NC	Not Calculated
NR	Not Requested/Not Reported
NS	Not Spiked
% D	Percent Difference
% REC	Percent Recovery
SOP	Standard Operating Procedure
ppbv	parts per billion by volume
ppm	parts per million
pptv	parts per trillion by volume
PQL	Practical Quantitation Limit
PAL	Performance Acceptance Limit
QA/QC	Quality Assurance/Quality Control
QL	Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference
RSD	Relative Standard Deviation
SERAS	Scientific, Engineering, Response and Analytical Services
SIM	Selected Ion Monitoring
Sur	Surrogate
TIC	Tentatively Identified Compound
TCLP	Toxicity Characteristic Leaching Procedure
VOC	Volatile Organic Compound
*	Value exceeds the acceptable QC limits

m ³	cubic meter	g	gram	kg	kilogram	L	liter
µg	microgram	µL	microliter	mg	milligram	mL	milliliter
ng	nanogram	pg	picogram	pCi	picocurie	s	sigma

Data Validation Flags

J	Value is estimated	R	Value is unusable
J+	Value is estimated high (metals only)	U	Not detected
J-	Value is estimated low (metals only)	UJ	Not detected and RL is estimated
N	Presumptively present (Aroclors only)		

Rev. 1/14/09

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Table 1.1a Results of the Analysis for VOC (ppbv) in Air
 WA# SERAS-130 Cabo Rojo Site

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Method: EPA TO-15 SIM

Lab Sample Number	P130403-MB	P1301219-001	P1301219-004
Sample Number	04/03/13-01	0-130-1177	0-130-1180
Sample Location	Method Blank	EQP-IA5	EQP-IA1

Analyte	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv
Dichlorodifluoromethane (CFC 12)	U 0.0051		0.43 0.0081		0.43 0.0089	
Chloromethane	U 0.012		0.32 J 0.019		0.35 J 0.021	
Vinyl Chloride	U 0.0098		U 0.016		U 0.017	
Bromomethane	U 0.0064		0.019 J 0.010		0.013 J 0.011	
Chloroethane	U 0.0095		0.016 0.015		U 0.017	
Trichlorodifluoromethane (CFC 11)	U 0.0045		0.19 0.0071		0.21 0.0078	
1,1-Dichloroethene (1,1-DCE)	U 0.0063		U 0.010		U 0.011	
Dichloromethane (Methylene Chloride)	U 0.029		0.11 J 0.046		0.35 J 0.051	
1,1,2-Trichlorotrifluoroethane	U 0.0033		0.062 0.0052		0.067 0.0057	
trans-1,2-Dichloroethene	U 0.0063		U 0.010		U 0.011	
1,1-Dichloroethane (1,1-DCA)	U 0.0062		U 0.0099		U 0.011	
cis-1,2-Dichloroethene	U 0.0063		U 0.010		U 0.011	
Chloroform	U 0.020		0.36 0.033		0.39 0.036	
1,2-Dichloroethane	U 0.0062		0.014 J 0.0099		0.021 J 0.011	
1,1,1-Trichloroethane (TCA)	U 0.0046		U 0.0073		U 0.0081	
Benzene	U 0.023		0.23 J 0.038		0.35 J 0.041	
Carbon Tetrachloride	U 0.0040		0.089 0.0064		0.083 0.0070	
1,2-Dichloropropane	U 0.0054		U 0.0087		U 0.0095	
Bromodichloromethane	U 0.0037		U 0.0060		U 0.0066	
Trichloroethene (TCE)	U 0.0047		U 0.0074		0.0099 0.0082	
cis-1,3-Dichloropropene	U 0.0055		U 0.0088		U 0.0097	
trans-1,3-Dichloropropene	U 0.0055		U 0.0088		U 0.0097	
1,1,2-Trichloroethane	U 0.018		U 0.029		U 0.032	
Toluene	U 0.027		0.95 J 0.042		2.2 J 0.047	
1,2-Dibromoethane	U 0.0033		U 0.0052		U 0.0057	
Tetrachloroethene	U 0.0037		0.017 J 0.0059		0.064 0.0065	
Chlorobenzene	U 0.022		U 0.035		U 0.038	
Ethylbenzene	U 0.023		0.23 J 0.037		0.32 J 0.041	
m,p-Xylenes	U 0.023		0.56 J 0.037		1.2 J 0.041	
o-Xylene	U 0.023		0.21 J 0.037		0.49 0.041	
1,1,2,2-Tetrachloroethane	U 0.0036		U 0.0058		U 0.0064	
1,3-Dichlorobenzene	U 0.0042		U 0.0067		U 0.0073	
1,4-Dichlorobenzene	U 0.0042		0.029 J 0.0067		0.033 0.0073	
1,2-Dichlorobenzene	U 0.0042		U 0.0067		U 0.0073	
1,2,4-Trichlorobenzene	U 0.0034		U 0.0054		U 0.0059	
Naphthalene	U 0.019		U 0.031		0.081 0.034	

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Table 1.1a (cont) Results of the Analysis for VOC (ppbv) in Air
 WA# SERAS-130 Cabo Rojo Site

Method : EPA TO-15 SIM

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Lab Sample Number	P130403-MB		P1301219-002		P1301219-003		P1301219-005	
Sample Number	04/03/13-02		0-130-1178		0-130-1179		0-130-1181	
Sample Location	Method Blank		EQP-SS6		EQP-SS1		EQP-IA4	
Analyte	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv
Dichlorodifluoromethane (CFC 12)	U 0.0051		U 1.1		U 0.42		0.42	0.0082
Chloromethane	U 0.012		U 2.6		U 1.0		0.34 J	0.020
Vinyl Chloride	U 0.0098		U 2.1		U 0.82		U	0.016
Bromomethane	U 0.0064		U 1.4		U 0.54		0.013 J	0.010
Chloroethane	U 0.0095		U 2.0		U 0.79		0.025	0.015
Trichlorodifluoromethane (CFC 11)	U 0.0045		U 0.95		0.86	0.37	0.19	0.0073
1,1-Dichloroethene (1,1-DCE)	U 0.0063		U 1.4		U 0.53		U	0.010
Dichloromethane (Methylene Chloride)	U 0.029		U 6.2		U 2.4		0.15 J	0.047
1,1,2-Trichlorotrifluoroethane	U 0.0033		U 0.70		U 0.27		0.060	0.0053
trans-1,2-Dichloroethene	U 0.0063		U 1.4		U 0.53		U	0.010
1,1-Dichloroethane (1,1-DCA)	U 0.0062		U 1.3		U 0.52		U	0.010
cis-1,2-Dichloroethene	U 0.0063		U 1.4		U 0.53		U	0.010
Chloroform	U 0.020		U 4.4		3.4	1.7	0.39	0.033
1,2-Dichloroethane	U 0.0062		U 1.3		U 0.52		0.013 J	0.010
1,1,1-Trichloroethane (TCA)	U 0.0046		U 0.98		U 0.38		U	0.0075
Benzene	U 0.023		U 5.0		U 2.0		0.33 J	0.038
Carbon Tetrachloride	U 0.0040		U 0.85		U 0.33		0.073	0.0065
1,2-Dichloropropane	U 0.0054		U 1.2		U 0.45		U	0.0088
Bromodichloromethane	U 0.0037		U 0.80		U 0.31		U	0.0061
Trichloroethene (TCE)	U 0.0047		U 1.0		21	0.39	U	0.0076
cis-1,3-Dichloropropene	U 0.0055		U 1.2		U 0.46		U	0.0090
trans-1,3-Dichloropropene	U 0.0055		U 1.2		U 0.46		U	0.0090
1,1,2-Trichloroethane	U 0.018		U 3.9		U 1.5		U	0.030
Toluene	U 0.027		U 5.7		U 2.2		1.2 J	0.043
1,2-Dibromoethane	U 0.0033		U 0.70		U 0.27		U	0.0053
Tetrachloroethene	U 0.0037	510	0.79	470	0.88		0.026 J	0.0060
Chlorobenzene	U 0.022		U 4.7		U 1.8		U	0.035
Ethylbenzene	U 0.023		U 4.9		U 1.9		0.27 J	0.038
m,p-Xylenes	U 0.023		U 4.9		U 1.9		0.81 J	0.038
o-Xylene	U 0.023		U 4.9		U 1.9		0.31 J	0.038
1,1,2,2-Tetrachloroethane	U 0.0036		U 0.78		U 0.30		U	0.0059
1,3-Dichlorobenzene	U 0.0042		U 0.89		U 0.35		U	0.0068
1,4-Dichlorobenzene	U 0.0042		U 0.89		U 0.35		0.030 J	0.0068
1,2-Dichlorobenzene	U 0.0042		U 0.89		U 0.35		U	0.0068
1,2,4-Trichlorobenzene	U 0.0034		U 0.72		U 0.28		U	0.0055
Naphthalene	U 0.019		U 4.1		U 1.6		0.064	0.031

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Table 1.1a (cont) Results of the Analysis for VOC (ppbv) in Air
 WA# SERAS-130 Cabo Rojo Site

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Method : EPA TO-15 SIM

Lab Sample Number	P1301219-006		P1301219-007		P1301219-009		P1301219-010	
Sample Number	0-130-1182		0-130-1183		0-130-1185		0-130-1186	
Sample Location	EQP-Amb4		SRHS-SS1		SRHS-IA1		SRHS-IA2	
Analyte	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv
Dichlorodifluoromethane (CFC 12)	0.40	0.0082	0.28	0.052	0.39	0.0089	0.40	0.0088
Chloromethane	0.32	J 0.020	0.25	J 0.12	0.62	0.021	0.52	0.021
Vinyl Chloride	U	0.016	U	0.10	U	0.017	U	0.017
Bromomethane	0.012	J 0.010	U	0.066	0.046	0.011	0.014	J 0.011
Chloroethane	U	0.015	0.13	0.097	0.034	0.017	0.025	0.016
Trichlorofluoromethane (CFC 11)	0.19	0.0072	4.8	0.046	0.19	0.0078	0.19	0.0077
1,1-Dichloroethene (1,1-DCE)	U	0.010	U	0.065	U	0.011	U	0.011
Dichloromethane (Methylene Chloride	0.12	J 0.047	0.33	0.29	0.14	J 0.051	0.13	J 0.050
1,1,2-Trichlorotrifluoroethane	0.060	0.0053	U	0.033	0.060	0.0057	0.059	0.0056
trans-1,2-Dichloroethene	U	0.010	U	0.065	U	0.011	U	0.011
1,1-Dichloroethane (1,1-DCA)	U	0.010	0.081	0.063	U	0.011	U	0.011
cis-1,2-Dichloroethene	U	0.010	U	0.065	U	0.011	U	0.011
Chloroform	U	0.033	U	0.21	0.50	0.036	0.51	0.035
1,2-Dichloroethane	0.010	J 0.010	U	0.063	U	0.011	U	0.011
1,1,1-Trichloroethane (TCA)	U	0.0074	0.074	0.047	U	0.0081	U	0.0079
Benzene	0.18	J 0.038	3.2	0.24	0.17	J 0.041	0.16	J 0.041
Carbon Tetrachloride	0.059	0.0064	U	0.041	0.071	0.0070	0.079	0.0069
1,2-Dichloropropane	U	0.0088	U	0.055	U	0.0095	U	0.0094
Bromodichloromethane	U	0.0060	U	0.038	U	0.0066	U	0.0065
Trichloroethene (TCE)	U	0.0075	U	0.048	0.010	0.0082	U	0.0081
cis-1,3-Dichloropropene	U	0.0089	U	0.056	U	0.0097	U	0.0095
trans-1,3-Dichloropropene	U	0.0089	U	0.056	U	0.0097	U	0.0095
1,1,2-Trichloroethane	U	0.030	U	0.19	U	0.032	U	0.032
Toluene	0.51	J 0.043	6.5	0.27	0.56	J 0.047	0.56	J 0.046
1,2-Dibromoethane	U	0.0053	U	0.033	U	0.0057	U	0.0056
Tetrachloroethene	U	0.0060	0.039	0.038	U	0.0065	U	0.0064
Chlorobenzene	U	0.035	0.38	0.22	U	0.038	U	0.038
Ethylbenzene	0.11	J 0.037	2.5	0.24	0.14	J 0.041	0.11	J 0.040
m,p-Xylenes	0.41	J 0.037	8.0	0.24	0.34	J 0.041	0.32	J 0.040
o-Xylene	0.18	J 0.037	1.9	0.24	0.13	J 0.041	0.11	J 0.040
1,1,2,2-Tetrachloroethane	U	0.0059	U	0.037	U	0.0064	U	0.0063
1,3-Dichlorobenzene	U	0.0067	U	0.043	U	0.0073	U	0.0072
1,4-Dichlorobenzene	0.031	J 0.0067	0.067	0.043	0.011	J 0.0073	0.0096	J 0.0072
1,2-Dichlorobenzene	U	0.0067	U	0.043	U	0.0073	U	0.0072
1,2,4-Trichlorobenzene	U	0.0055	U	0.034	U	0.0059	U	0.0058
Naphthalene	0.068	0.031	0.83	0.20	0.041	0.034	U	0.033

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Table 1.1a (cont) Results of the Analysis for VOC (ppbv) in Air
 WA# SERAS-130 Cabo Rojo Site

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Method : EPA TO-15 SIM

Lab Sample Number	P1301219-011		P1301219-012		P1301219-013		P1301219-014	
Sample Number	0-130-1187		0-130-1188		0-130-1189		0-130-1190	
Sample Location	SRHS-Amb		RC-CS1		RC-IA1		RC-CS2	
Analyte	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv
Dichlorodifluoromethane (CFC 12)	0.40	0.0088	0.40	0.0085	0.37	0.023	0.39	0.0087
Chloromethane	0.52	0.021	0.27 J	0.020	0.43	0.054	0.36	0.021
Vinyl Chloride	U	0.017	U	0.017	U	0.044	U	0.017
Bromomethane	0.013 J	0.011	0.011 J	0.011	U	0.029	0.015 J	0.011
Chloroethane	0.024	0.016	0.033	0.016	U	0.042	U	0.016
Trichlorofluoromethane (CFC 11)	0.18	0.0077	0.62	0.0075	0.18	0.020	0.76	0.0077
1,1-Dichloroethene (1,1-DCE)	U	0.011	U	0.011	U	0.028	U	0.011
Dichloromethane (Methylene Chloride)	0.13 J	0.050	0.15 J	0.049	0.15 J	0.13	0.14 J	0.050
1,1,2-Trichlorotrifluoroethane	0.059	0.0056	0.060	0.0055	0.056	0.015	0.058	0.0056
trans-1,2-Dichloroethene	U	0.011	U	0.011	U	0.028	U	0.011
1,1-Dichloroethane (1,1-DCA)	U	0.011	U	0.010	U	0.027	U	0.011
cis-1,2-Dichloroethene	U	0.011	U	0.011	U	0.028	U	0.011
Chloroform	U	0.035	U	0.035	U	0.091	U	0.035
1,2-Dichloroethane	U	0.011	0.011 J	0.010	U	0.027	U	0.011
1,1,1-Trichloroethane (TCA)	U	0.0079	U	0.0077	U	0.020	U	0.0079
Benzene	0.18 J	0.041	0.17 J	0.040	0.15 J	0.10	0.10 J	0.040
Carbon Tetrachloride	0.074	0.0069	0.073	0.0067	0.068	0.018	0.071	0.0068
1,2-Dichloropropane	U	0.0094	U	0.0091	U	0.024	U	0.0093
Bromodichloromethane	U	0.0065	U	0.0063	U	0.017	U	0.0064
Trichloroethene (TCE)	U	0.0081	U	0.0079	U	0.021	U	0.0080
cis-1,3-Dichloropropene	U	0.0095	U	0.0093	U	0.025	U	0.0095
trans-1,3-Dichloropropene	U	0.0095	U	0.0093	U	0.025	U	0.0095
1,1,2-Trichloroethane	U	0.032	U	0.031	U	0.082	U	0.032
Toluene	0.54 J	0.046	0.62 J	0.045	0.57 J	0.12	0.38 J	0.046
1,2-Dibromoethane	U	0.0056	U	0.0055	U	0.014	U	0.0056
Tetrachloroethene	U	0.0064	0.0080	0.0062	U	0.016	U	0.0063
Chlorobenzene	U	0.038	U	0.037	U	0.097	U	0.037
Ethylbenzene	0.11 J	0.040	0.072 J	0.039	U	0.10	0.072 J	0.040
m,p-Xylenes	0.32 J	0.040	0.28 J	0.039	0.28 J	0.10	0.29 J	0.040
o-Xylene	0.14 J	0.040	0.13 J	0.039	0.12 J	0.10	0.13 J	0.040
1,1,2,2-Tetrachloroethane	U	0.0063	U	0.0062	U	0.016	U	0.0063
1,3-Dichlorobenzene	U	0.0072	U	0.0070	U	0.019	U	0.0072
1,4-Dichlorobenzene	0.012 J	0.0072	0.013 J	0.0070	U	0.019	0.011 J	0.0072
1,2-Dichlorobenzene	U	0.0072	U	0.0070	U	0.019	U	0.0072
1,2,4-Trichlorobenzene	U	0.0058	U	0.0057	U	0.015	U	0.0058
Naphthalene	0.095	0.033	0.26	0.032	U	0.085	0.096	0.033

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Table 1.1a (cont) Results of the Analysis for VOC (ppbv) in Air
 WA# SERAS-130 Cabo Rojo Site

Method : EPA TO-15 SIM

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Lab Sample Number	P1301219-015		P1301219-016	
Sample Number	0-130-1191		0-130-1192	
Sample Location	RC-CS3		Trip Blank	
Analyte	Result ppbv	RL ppbv	Result ppbv	RL ppbv
Dichlorodifluoromethane (CFC 12)	0.39	0.0087	0.048	0.0051
Chloromethane	0.34	J 0.021	0.075	0.012
Vinyl Chloride	U	0.017	U	0.0098
Bromomethane	0.012	J 0.011	0.0070	0.0064
Chloroethane	0.038	0.016	U	0.0095
Trichlorofluoromethane (CFC 11)	0.81	0.0077	0.024	0.0045
1,1-Dichloroethene (1,1-DCE)	U	0.011	U	0.0063
Dichloromethane (Methylene Chloride	0.15	J 0.050	0.20	0.029
1,1,2-Trichlorotrifluoroethane	0.059	0.0056	0.0069	0.0033
trans-1,2-Dichloroethene	U	0.011	U	0.0063
1,1-Dichloroethane (1,1-DCA)	U	0.011	U	0.0062
cis-1,2-Dichloroethene	U	0.011	U	0.0063
Chloroform	U	0.035	0.038	0.020
1,2-Dichloroethane	U	0.011	0.016	0.0062
1,1,1-Trichloroethane (TCA)	U	0.0079	U	0.0046
Benzene	0.22	J 0.040	0.12	0.023
Carbon Tetrachloride	0.070	0.0068	0.0062	0.0040
1,2-Dichloropropane	U	0.0093	U	0.0054
Bromodichloromethane	U	0.0064	U	0.0037
Trichloroethene (TCE)	U	0.0080	U	0.0047
cis-1,3-Dichloropropene	U	0.0095	U	0.0055
trans-1,3-Dichloropropene	U	0.0095	U	0.0055
1,1,2-Trichloroethane	U	0.032	U	0.018
Toluene	0.98	J 0.046	1.1	0.027
1,2-Dibromoethane	U	0.0056	U	0.0033
Tetrachloroethene	0.010	J 0.0063	0.0069	0.0037
Chlorobenzene	U	0.037	U	0.022
Ethylbenzene	0.14	J 0.040	0.098	0.023
m,p-Xylenes	0.49	J 0.040	0.26	0.023
o-Xylene	0.21	J 0.040	0.094	0.023
1,1,2,2-Tetrachloroethane	U	0.0063	U	0.0036
1,3-Dichlorobenzene	U	0.0072	U	0.0042
1,4-Dichlorobenzene	0.014	J 0.0072	0.0065	0.0042
1,2-Dichlorobenzene	U	0.0072	U	0.0042
1,2,4-Trichlorobenzene	U	0.0058	U	0.0034
Naphthalene	0.22	0.033	U	0.019

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Table 1.1a (cont) Results of the Analysis for VOC (ppbv) in Air
 WA# SERAS-130 Cabo Rojo Site

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Method : EPA TO-15 SIM

Lab Sample Number	P130404-MB		P1301219-008	
Sample Number	4/4/2013		0-130-1184	
Sample Location	Method Blank		SRHS-SS2	
Analyte	Result ppbv	RL ppbv	Result ppbv	RL ppbv
Dichlorodifluoromethane (CFC 12)	U	0.0051	0.35	0.019
Chloromethane	U	0.012	0.46	0.045
Vinyl Chloride	U	0.0098	U	0.036
Bromomethane	U	0.0064	0.026 J	0.024
Chloroethane	U	0.0095	U	0.035
Trichlorofluoromethane (CFC 11)	U	0.0045	0.91	0.017
1,1-Dichloroethene (1,1-DCE)	U	0.0063	U	0.023
Dichloromethane (Methylene Chloride)	U	0.029	0.13 J	0.11
1,1,2-Trichlorotrifluoroethane	U	0.0033	0.052	0.012
trans-1,2-Dichloroethene	U	0.0063	U	0.023
1,1-Dichloroethane (1,1-DCA)	U	0.0062	0.028	0.023
cis-1,2-Dichloroethene	U	0.0063	U	0.023
Chloroform	U	0.020	0.36	0.076
1,2-Dichloroethane	U	0.0062	U	0.023
1,1,1-Trichloroethane (TCA)	U	0.0046	0.023	0.017
Benzene	U	0.023	3.4	0.087
Carbon Tetrachloride	U	0.0040	0.058	0.015
1,2-Dichloropropane	U	0.0054	U	0.020
Bromodichloromethane	U	0.0037	U	0.014
Trichloroethene (TCE)	U	0.0047	U	0.017
cis-1,3-Dichloropropene	U	0.0055	U	0.020
trans-1,3-Dichloropropene	U	0.0055	U	0.020
1,1,2-Trichloroethane	U	0.018	U	0.068
Toluene	U	0.027	14	0.099
1,2-Dibromoethane	U	0.0033	U	0.012
Tetrachloroethene	U	0.0037	0.047	0.014
Chlorobenzene	U	0.022	0.45	0.081
Ethylbenzene	U	0.023	15	0.085
m,p-Xylenes	U	0.023	69	0.38
o-Xylene	U	0.023	13	0.085
1,1,2,2-Tetrachloroethane	U	0.0036	U	0.014
1,3-Dichlorobenzene	U	0.0042	U	0.015
1,4-Dichlorobenzene	U	0.0042	0.044	0.015
1,2-Dichlorobenzene	U	0.0042	U	0.015
1,2,4-Trichlorobenzene	U	0.0034	U	0.013
Naphthalene	U	0.019	0.27	0.071

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Table 1.1b Results of the Analysis for VOC (ug/m³) in Air
 WA# SERAS-130 Cabo Rojo Site

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Method : EPA TO-15 SIM

Lab Sample Number	P130403-MB		P1301219-001		P1301219-004	
Sample Number	04/03/13-01		0-130-1177		0-130-1180	
Sample Location	Method Blank		EQP-IA5		EQP-IA1	
Analyte	Result ug/m ³	RL ug/m ³	Result ug/m ³	RL ug/m ³	Result ug/m ³	RL ug/m ³
Dichlorodifluoromethane (CFC 12)	U	0.025	2.1	0.040	2.1	0.044
Chloromethane	U	0.025	0.67 J	0.040	0.72 J	0.044
Vinyl Chloride	U	0.025	U	0.040	U	0.044
Bromomethane	U	0.025	0.072 J	0.040	0.051 J	0.044
Chloroethane	U	0.025	0.041	0.040	U	0.044
Trichlorofluoromethane (CFC 11)	U	0.025	1.1	0.040	1.2	0.044
1,1-Dichloroethene (1,1-DCE)	U	0.025	U	0.040	U	0.044
Dichloromethane (Methylene Chlorid	U	0.10	0.40 J	0.16	1.2 J	0.18
1,1,2-Trichlorotrifluoroethane	U	0.025	0.48	0.040	0.51	0.044
trans-1,2-Dichloroethene	U	0.025	U	0.040	U	0.044
1,1-Dichloroethane (1,1-DCA)	U	0.025	U	0.040	U	0.044
cis-1,2-Dichloroethene	U	0.025	U	0.040	U	0.044
Chloroform	U	0.10	1.7	0.16	1.9	0.18
1,2-Dichloroethane	U	0.025	0.058 J	0.040	0.086 J	0.044
1,1,1-Trichloroethane (TCA)	U	0.025	U	0.040	U	0.044
Benzene	U	0.075	0.73 J	0.12	1.1 J	0.13
Carbon Tetrachloride	U	0.025	0.56	0.040	0.52	0.044
1,2-Dichloropropane	U	0.025	U	0.040	U	0.044
Bromodichloromethane	U	0.025	U	0.040	U	0.044
Trichloroethene (TCE)	U	0.025	U	0.040	0.053	0.044
cis-1,3-Dichloropropene	U	0.025	U	0.040	U	0.044
trans-1,3-Dichloropropene	U	0.025	U	0.040	U	0.044
1,1,2-Trichloroethane	U	0.10	U	0.16	U	0.18
Toluene	U	0.10	3.6 J	0.16	8.1 J	0.18
1,2-Dibromoethane	U	0.025	U	0.040	U	0.044
Tetrachloroethene	U	0.025	0.12 J	0.040	0.44	0.044
Chlorobenzene	U	0.10	U	0.16	U	0.18
Ethylbenzene	U	0.10	1.0 J	0.16	1.4 J	0.18
m,p-Xylenes	U	0.10	2.4 J	0.16	5.2 J	0.18
o-Xylene	U	0.10	0.90 J	0.16	2.1 J	0.18
1,1,2,2-Tetrachloroethane	U	0.025	U	0.040	U	0.044
1,3-Dichlorobenzene	U	0.025	U	0.040	U	0.044
1,4-Dichlorobenzene	U	0.025	0.17 J	0.040	0.20 J	0.044
1,2-Dichlorobenzene	U	0.025	U	0.040	U	0.044
1,2,4-Trichlorobenzene	U	0.025	U	0.040	U	0.044
Naphthalene	U	0.10	U	0.16	0.42	0.18

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Table 1.1b (cont) Results of the Analysis for VOC ($\mu\text{g}/\text{m}^3$) in Air
 WA# SERAS-130 Cabo Rojo Site

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Method : EPA TO-15 SIM

Lab Sample Number	P130403-MB		P1301219-002		P1301219-003		P1301219-005	
Sample Number	04/03/13-02		0-130-1178		0-130-1179		0-130-1181	
Sample Location	Method Blank		EQP-SS6		EQP-SS1		EQP-IA4	
Analyte	Result $\mu\text{g}/\text{m}^3$	RL $\mu\text{g}/\text{m}^3$	Result $\mu\text{g}/\text{m}^3$	RL $\mu\text{g}/\text{m}^3$	Result $\mu\text{g}/\text{m}^3$	RL $\mu\text{g}/\text{m}^3$	Result $\mu\text{g}/\text{m}^3$	RL $\mu\text{g}/\text{m}^3$
Dichlorodifluoromethane (CFC 12)	U	0.025	U	5.4	U	2.1	2.1	0.041
Chloromethane	U	0.025	U	5.4	U	2.1	0.70 J	0.041
Vinyl Chloride	U	0.025	U	5.4	U	2.1	U	0.041
Bromomethane	U	0.025	U	5.4	U	2.1	0.050 J	0.041
Chloroethane	U	0.025	U	5.4	U	2.1	0.065	0.041
Trichlorodifluoromethane (CFC 11)	U	0.025	U	5.4	4.8	2.1	1.1	0.041
1,1-Dichloroethene (1,1-DCE)	U	0.025	U	5.4	U	2.1	U	0.041
Dichloromethane (Methylene Chloride)	U	0.10	U	21	U	8.4	0.53 J	0.16
1,1,2-Trichlorotrifluoroethane	U	0.025	U	5.4	U	2.1	0.46	0.041
trans-1,2-Dichloroethene	U	0.025	U	5.4	U	2.1	U	0.041
1,1-Dichloroethane (1,1-DCA)	U	0.025	U	5.4	U	2.1	U	0.041
cis-1,2-Dichloroethene	U	0.025	U	5.4	U	2.1	U	0.041
Chloroform	U	0.10	U	21	17	8.4	1.9	0.16
1,2-Dichloroethane	U	0.025	U	5.4	U	2.1	0.053 J	0.041
1,1,1-Trichloroethane (TCA)	U	0.025	U	5.4	U	2.1	U	0.041
Benzene	U	0.075	U	16	U	6.3	1.1 J	0.12
Carbon Tetrachloride	U	0.025	U	5.4	U	2.1	0.46	0.041
1,2-Dichloropropane	U	0.025	U	5.4	U	2.1	U	0.041
Bromodichloromethane	U	0.025	U	5.4	U	2.1	U	0.041
Trichloroethene (TCE)	U	0.025	U	5.4	110	2.1	U	0.041
cis-1,3-Dichloropropene	U	0.025	U	5.4	U	2.1	U	0.041
trans-1,3-Dichloropropene	U	0.025	U	5.4	U	2.1	U	0.041
1,1,2-Trichloroethane	U	0.10	U	21	U	8.4	U	0.16
Toluene	U	0.10	U	21	U	8.4	4.4 J	0.16
1,2-Dibromoethane	U	0.025	U	5.4	U	2.1	U	0.041
Tetrachloroethene	U	0.025	3500	5.4	3200	6.0	0.17 J	0.041
Chlorobenzene	U	0.10	U	21	U	8.4	U	0.16
Ethylbenzene	U	0.10	U	21	U	8.4	1.2 J	0.16
m,p-Xylenes	U	0.10	U	21	U	8.4	3.5 J	0.16
o-Xylene	U	0.10	U	21	U	8.4	1.3 J	0.16
1,1,2,2-Tetrachloroethane	U	0.025	U	5.4	U	2.1	U	0.041
1,3-Dichlorobenzene	U	0.025	U	5.4	U	2.1	U	0.041
1,4-Dichlorobenzene	U	0.025	U	5.4	U	2.1	0.18 J	0.041
1,2-Dichlorobenzene	U	0.025	U	5.4	U	2.1	U	0.041
1,2,4-Trichlorobenzene	U	0.025	U	5.4	U	2.1	U	0.041
Naphthalene	U	0.10	U	21	U	8.4	0.34	0.16

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Table 1.1b (cont) Results of the Analysis for VOC ($\mu\text{g}/\text{m}^3$) in Air
 WA# SERAS-130 Cabo Rojo Site

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Method : EPA TO-15 SIM

Lab Sample Number	P1301219-006	P1301219-007	P1301219-009	P1301219-010
Sample Number	0-130-1182	0-130-1183	0-130-1185	0-130-1186
Sample Location	EQP-Amb4	SRHS-SS1	SRHS-IA1	SRHS-IA2
Analyte	Result $\mu\text{g}/\text{m}^3$	RL $\mu\text{g}/\text{m}^3$	Result $\mu\text{g}/\text{m}^3$	RL $\mu\text{g}/\text{m}^3$
Dichlorodifluoromethane (CFC 12)	2.0	0.041	1.4	0.26
Chloromethane	0.66 J	0.041	0.51 J	0.26
Vinyl Chloride	U	0.041	U	0.26
Bromomethane	0.045 J	0.041	U	0.26
Chloroethane	U	0.041	0.36	0.26
Trichlorofluoromethane (CFC 11)	1.1	0.041	27	0.26
1,1-Dichloroethene (1,1-DCE)	U	0.041	U	0.26
Dichloromethane (Methylene Chlorid	0.43 J	0.16	1.1	1.0
1,1,2-Trichlorotrifluoroethane	0.46	0.041	U	0.26
trans-1,2-Dichloroethene	U	0.041	U	0.26
1,1-Dichloroethane (1,1-DCA)	U	0.041	0.33	0.26
cis-1,2-Dichloroethene	U	0.041	U	0.26
Chloroform	U	0.16	U	1.0
1,2-Dichloroethane	0.042 J	0.041	U	0.26
1,1,1-Trichloroethane (TCA)	U	0.041	0.41	0.26
Benzene	0.56 J	0.12	10	0.77
Carbon Tetrachloride	0.37	0.041	U	0.26
1,2-Dichloropropane	U	0.041	U	0.26
Bromodichloromethane	U	0.041	U	0.26
Trichloroethene (TCE)	U	0.041	U	0.26
cis-1,3-Dichloropropene	U	0.041	U	0.26
trans-1,3-Dichloropropene	U	0.041	U	0.26
1,1,2-Trichloroethane	U	0.16	U	1.0
Toluene	1.9 J	0.16	24	1.0
1,2-Dibromoethane	U	0.041	U	0.26
Tetrachloroethene	U	0.041	0.26	0.26
Chlorobenzene	U	0.16	1.7	1.0
Ethylbenzene	0.50 J	0.16	11	1.0
m,p-Xylenes	1.8 J	0.16	35	1.0
o-Xylene	0.78 J	0.16	8.2	1.0
1,1,2,2-Tetrachloroethane	U	0.041	U	0.26
1,3-Dichlorobenzene	U	0.041	U	0.26
1,4-Dichlorobenzene	0.19 J	0.041	0.40	0.26
1,2-Dichlorobenzene	U	0.041	U	0.26
1,2,4-Trichlorobenzene	U	0.041	U	0.26
Naphthalene	0.35	0.16	4.4	1.0

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Table 1.1b (cont) Results of the Analysis for VOC ($\mu\text{g}/\text{m}^3$) in Air
 WA# SERAS-130 Cabo Rojo Site

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Method : EPA TO-15 SIM

Lab Sample Number	P1301219-011	P1301219-012	P1301219-013	P1301219-014
Sample Number	0-130-1187	0-130-1188	0-130-1189	0-130-1190
Sample Location	SRHS-Amb	RC-CS1	RC-IA1	RC-CS2
Analyte	Result $\mu\text{g}/\text{m}^3$	RL $\mu\text{g}/\text{m}^3$	Result $\mu\text{g}/\text{m}^3$	RL $\mu\text{g}/\text{m}^3$
Dichlorodifluoromethane (CFC 12)	2.0	0.043	2.0	0.042
Chloromethane	1.1	0.043	0.55 J	0.042
Vinyl Chloride	U	0.043	U	0.042
Bromomethane	0.052 J	0.043	0.042 J	0.042
Chloroethane	0.064	0.043	0.086	0.042
Trichlorofluoromethane (CFC 11)	1.0	0.043	3.5	0.042
1,1-Dichloroethene (1,1-DCE)	U	0.043	U	0.042
Dichloromethane (Methylene Chlorid	0.45 J	0.17	0.52 J	0.17
1,1,2-Trichlorotrifluoroethane	0.45	0.043	0.46	0.042
trans-1,2-Dichloroethene	U	0.043	U	0.042
1,1-Dichloroethane (1,1-DCA)	U	0.043	U	0.042
cis-1,2-Dichloroethene	U	0.043	U	0.042
Chloroform	U	0.17	U	0.17
1,2-Dichloroethane	U	0.043	0.043 J	0.042
1,1,1-Trichloroethane (TCA)	U	0.043	U	0.042
Benzene	0.58 J	0.13	0.53 J	0.13
Carbon Tetrachloride	0.46	0.043	0.46	0.042
1,2-Dichloropropane	U	0.043	U	0.042
Bromodichloromethane	U	0.043	U	0.042
Trichloroethene (TCE)	U	0.043	U	0.042
cis-1,3-Dichloropropene	U	0.043	U	0.042
trans-1,3-Dichloropropene	U	0.043	U	0.042
1,1,2-Trichloroethane	U	0.17	U	0.17
Toluene	2.0 J	0.17	2.3 J	0.17
1,2-Dibromoethane	U	0.043	U	0.042
Tetrachloroethene	U	0.043	0.055 J	0.042
Chlorobenzene	U	0.17	U	0.17
Ethylbenzene	0.46 J	0.17	0.31 J	0.17
m,p-Xylenes	1.4 J	0.17	1.2 J	0.17
o-Xylene	0.59 J	0.17	0.55 J	0.17
1,1,2,2-Tetrachloroethane	U	0.043	U	0.042
1,3-Dichlorobenzene	U	0.043	U	0.042
1,4-Dichlorobenzene	0.072 J	0.043	0.078 J	0.042
1,2-Dichlorobenzene	U	0.043	U	0.042
1,2,4-Trichlorobenzene	U	0.043	U	0.042
Naphthalene	0.50	0.17	1.4	0.17

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Table 1.1b (cont) Results of the Analysis for VOC (ug/m³) in Air
 WA# SERAS-130 Cabo Rojo Site

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Method : EPA TO-15 SIM

Lab Sample Number	P1301219-015	P1301219-016	
Sample Number	0-130-1191	0-130-1192	
Sample Location	RC-CS3	Trip Blank	
Analyte	Result ug/m ³	RL ug/m ³	Result ug/m ³
Dichlorodifluoromethane (CFC 12)	1.9	0.043	0.24
Chloromethane	0.71 J	0.043	0.15
Vinyl Chloride	U	0.043	U
Bromomethane	0.048 J	0.043	0.027
Chloroethane	0.099	0.043	U
Trichlorodifluoromethane (CFC 11)	4.6	0.043	0.13
1,1-Dichloroethene (1,1-DCE)	U	0.043	U
Dichloromethane (Methylene Chloride)	0.53 J	0.17	0.69
1,1,2-Trichlorotrifluoroethane	0.46	0.043	0.053
trans-1,2-Dichloroethene	U	0.043	U
1,1-Dichloroethane (1,1-DCA)	U	0.043	U
cis-1,2-Dichloroethene	U	0.043	U
Chloroform	U	0.17	0.19
1,2-Dichloroethane	U	0.043	0.066
1,1,1-Trichloroethane (TCA)	U	0.043	U
Benzene	0.72 J	0.13	0.38
Carbon Tetrachloride	0.44	0.043	0.039
1,2-Dichloropropane	U	0.043	U
Bromodichloromethane	U	0.043	U
Trichloroethene (TCE)	U	0.043	U
cis-1,3-Dichloropropene	U	0.043	U
trans-1,3-Dichloropropene	U	0.043	U
1,1,2-Trichloroethane	U	0.17	U
Toluene	3.7 J	0.17	4.1
1,2-Dibromoethane	U	0.043	U
Tetrachloroethene	0.068 J	0.043	0.047
Chlorobenzene	U	0.17	U
Ethylbenzene	0.61 J	0.17	0.43
m,p-Xylenes	2.1 J	0.17	1.1
o-Xylene	0.92 J	0.17	0.41
1,1,2,2-Tetrachloroethane	U	0.043	U
1,3-Dichlorobenzene	U	0.043	U
1,4-Dichlorobenzene	0.082 J	0.043	0.039
1,2-Dichlorobenzene	U	0.043	U
1,2,4-Trichlorobenzene	U	0.043	U
Naphthalene	1.2	0.17	U

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Table 1.1b (cont) Results of the Analysis for VOC (ug/m³) in Air
 WA# SERAS-130 Cabo Rojo Site

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Method : EPA TO-15 SIM

Lab Sample Number	P130404-MB	P1301219-008		
Sample Number	4/4/2013	0-130-1184		
Sample Location	Method Blank	SRHS-SS2		
Analyte	Result ug/m ³	RL ug/m ³	Result ug/m ³	RL ug/m ³
Dichlorodifluoromethane (CFC 12)	U	0.025	1.7	0.093
Chloromethane	U	0.025	0.94	0.093
Vinyl Chloride	U	0.025	U	0.093
Bromomethane	U	0.025	0.10 J	0.093
Chloroethane	U	0.025	U	0.093
Trichlorofluoromethane (CFC 11)	U	0.025	5.1	0.093
1,1-Dichloroethene (1,1-DCE)	U	0.025	U	0.093
Dichloromethane (Methylene Chloride)	U	0.10	0.44 J	0.37
1,1,2-Trichlorotrifluoroethane	U	0.025	0.40	0.093
trans-1,2-Dichloroethene	U	0.025	U	0.093
1,1-Dichloroethane (1,1-DCA)	U	0.025	0.11	0.093
cis-1,2-Dichloroethene	U	0.025	U	0.093
Chloroform	U	0.10	1.8	0.37
1,2-Dichloroethane	U	0.025	U	0.093
1,1,1-Trichloroethane (TCA)	U	0.025	0.13	0.093
Benzene	U	0.075	11	0.28
Carbon Tetrachloride	U	0.025	0.36	0.093
1,2-Dichloropropane	U	0.025	U	0.093
Bromodichloromethane	U	0.025	U	0.093
Trichloroethene (TCE)	U	0.025	U	0.093
cis-1,3-Dichloropropene	U	0.025	U	0.093
trans-1,3-Dichloropropene	U	0.025	U	0.093
1,1,2-Trichloroethane	U	0.10	U	0.37
Toluene	U	0.10	52	0.37
1,2-Dibromoethane	U	0.025	U	0.093
Tetrachloroethene	U	0.025	0.32	0.093
Chlorobenzene	U	0.10	2.1	0.37
Ethylbenzene	U	0.10	64	0.37
m,p-Xylenes	U	0.10	300	1.7
o-Xylene	U	0.10	56	0.37
1,1,2,2-Tetrachloroethane	U	0.025	U	0.093
1,3-Dichlorobenzene	U	0.025	U	0.093
1,4-Dichlorobenzene	U	0.025	0.27	0.093
1,2-Dichlorobenzene	U	0.025	U	0.093
1,2,4-Trichlorobenzene	U	0.025	U	0.093
Naphthalene	U	0.10	1.4	0.37

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Table 2.1 Results of the LCS Analysis for VOC in Air
 WA# SERAS-130 Cabo Rojo Site

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Sample ID: LCS 04/03/2013-1

Analyte	LCS Spike Amount ppbv	LCS Conc. ppbv	% Recovery	QC Limits % Recovery
Dichlorodifluoromethane (CFC 12)	0.817	0.714	87	58-115
Chloromethane	1.90	1.60	84	46-131
Vinyl Chloride	1.57	1.34	85	56-117
Bromomethane	1.03	0.908	88	57-119
Chloroethane	1.53	1.27	83	56-117
Trichlorodifluoromethane (CFC 11)	0.748	0.614	82	57-105
1,1-Dichloroethene (1,1-DCE)	1.10	0.949	86	62-113
Dichloromethane (Methylene Chloride)	1.22	1.02	84	59-111
1,1,2-Trichlorotrifluoroethane	0.553	0.482	87	64-110
trans-1,2-Dichloroethene	1.02	0.868	85	61-111
1,1-Dichloroethane (1,1-DCA)	1.02	0.862	85	59-119
cis-1,2-Dichloroethene	1.08	0.934	86	63-112
Chloroform	0.910	0.760	84	55-111
1,2-Dichloroethane	1.03	0.918	89	54-118
1,1,1-Trichloroethane (TCA)	0.748	0.670	90	57-115
Benzene	1.30	1.17	90	62-118
Carbon Tetrachloride	0.674	0.607	90	56-112
1,2-Dichloropropane	0.883	0.720	82	52-121
Bromodichloromethane	0.609	0.518	85	51-118
Trichloroethene (TCE)	0.737	0.640	87	58-113
cis-1,3-Dichloropropene	0.864	0.752	87	53-119
trans-1,3-Dichloropropene	0.961	0.854	89	50-121
1,1,2-Trichloroethane	0.741	0.612	83	55-118
Toluene	1.10	0.958	87	58-108
1,2-Dibromoethane	0.542	0.462	85	56-114
Tetrachloroethene	0.561	0.492	88	60-111
Chlorobenzene	0.904	0.774	86	60-114
Ethylbenzene	0.949	0.821	87	57-112
m,p-Xylenes	1.90	1.68	88	57-113
o-Xylene	0.921	0.815	88	58-115
1,1,2,2-Tetrachloroethane	0.577	0.491	85	55-115
1,3-Dichlorobenzene	0.686	0.614	90	55-123
1,4-Dichlorobenzene	0.706	0.592	84	53-118
1,2-Dichlorobenzene	0.679	0.593	87	52-121
1,2,4-Trichlorobenzene	0.539	0.457	85	41-134
Naphthalene	0.679	0.574	85	29-150

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Table 2.1 Results of the LCS Analysis for VOC in Air
 WA# SERAS-130 Cabo Rojo Site

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Sample ID: LCS 04/04/13-2

Analyte	LCS Spike Amount ppbv	LCS Conc. ppbv	% Recovery	QC Limits % Recovery
Dichlorodifluoromethane (CFC 12)	0.817	0.713	87	58-115
Chloromethane	1.90	2.13	112	46-131
Vinyl Chloride	1.57	1.72	110	56-117
Bromomethane	1.03	1.09	106	57-119
Chloroethane	1.53	1.79	117	56-117
Trichlorofluoromethane (CFC 11)	0.748	0.618	83	57-105
1,1-Dichloroethene (1,1-DCE)	1.10	1.04	95	62-113
Dichloromethane (Methylene Chloride)	1.22	1.14	93	59-111
1,1,2-Trichlorotrifluoroethane	0.553	0.462	84	64-110
trans-1,2-Dichloroethene	1.02	0.943	92	61-111
1,1-Dichloroethane (1,1-DCA)	1.02	0.993	97	59-119
cis-1,2-Dichloroethene	1.08	1.02	94	63-112
Chloroform	0.910	0.780	86	55-111
1,2-Dichloroethane	1.03	0.898	87	54-118
1,1,1-Trichloroethane (TCA)	0.748	0.639	85	57-115
Benzene	1.30	1.37	105	62-118
Carbon Tetrachloride	0.674	0.558	83	56-112
1,2-Dichloropropane	0.883	0.853	97	52-121
Bromodichloromethane	0.609	0.508	83	51-118
Trichloroethene (TCE)	0.737	0.612	83	58-113
cis-1,3-Dichloropropene	0.864	0.809	94	53-119
trans-1,3-Dichloropropene	0.961	0.878	91	50-121
1,1,2-Trichloroethane	0.741	0.654	88	55-118
Toluene	1.10	1.02	93	58-108
1,2-Dibromoethane	0.542	0.462	85	56-114
Tetrachloroethene	0.561	0.461	82	60-111
Chlorobenzene	0.904	0.793	88	60-114
Ethylbenzene	0.949	0.914	96	57-112
m,p-Xylenes	1.90	1.82	96	57-113
o-Xylene	0.921	0.872	95	58-115
1,1,2,2-Tetrachloroethane	0.577	0.548	95	55-115
1,3-Dichlorobenzene	0.686	0.581	85	55-123
1,4-Dichlorobenzene	0.706	0.568	80	53-118
1,2-Dichlorobenzene	0.679	0.566	83	52-121
1,2,4-Trichlorobenzene	0.539	0.418	78	41-134
Naphthalene	0.679	0.592	87	29-150

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Table 2.1 Results of the LCS Analysis for VOC in Air
 WA# SERAS-130 Cabo Rojo Site

Page 3 of 3

Sample ID: LCS 04/04/13

Analyte	LCS Spike Amount ppbv	LCS Conc. ppbv	% Recovery	QC Limits % Recovery
Dichlorodifluoromethane (CFC 12)	0.817	0.665	81	58-115
Chloromethane	1.90	2.00	105	46-131
Vinyl Chloride	1.57	1.62	103	56-117
Bromomethane	1.03	1.04	101	57-119
Chloroethane	1.53	1.68	110	56-117
Trichlorodifluoromethane (CFC 11)	0.748	0.585	78	57-105
1,1-Dichloroethene (1,1-DCE)	1.10	0.986	90	62-113
Dichloromethane (Methylene Chloride)	1.22	1.10	90	59-111
1,1,2-Trichlorotrifluoroethane	0.553	0.442	80	64-110
trans-1,2-Dichloroethene	1.02	0.914	90	61-111
1,1-Dichloroethane (1,1-DCA)	1.02	0.943	92	59-119
cis-1,2-Dichloroethene	1.08	0.969	90	63-112
Chloroform	0.910	0.736	81	55-111
1,2-Dichloroethane	1.03	0.833	81	54-118
1,1,1-Trichloroethane (TCA)	0.748	0.599	80	57-115
Benzene	1.30	1.30	100	62-118
Carbon Tetrachloride	0.674	0.530	79	56-112
1,2-Dichloropropane	0.883	0.816	92	52-121
Bromodichloromethane	0.609	0.484	79	51-118
Trichloroethene (TCE)	0.737	0.593	80	58-113
cis-1,3-Dichloropropene	0.864	0.780	90	53-119
trans-1,3-Dichloropropene	0.961	0.856	89	50-121
1,1,2-Trichloroethane	0.741	0.630	85	55-118
Toluene	1.10	1.00	91	58-108
1,2-Dibromoethane	0.542	0.449	83	56-114
Tetrachloroethene	0.561	0.432	77	60-111
Chlorobenzene	0.904	0.795	88	60-114
Ethylbenzene	0.949	0.914	96	57-112
m,p-Xylenes	1.90	1.81	95	57-113
o-Xylene	0.921	0.867	94	58-115
1,1,2,2-Tetrachloroethane	0.577	0.532	92	55-115
1,3-Dichlorobenzene	0.686	0.578	84	55-123
1,4-Dichlorobenzene	0.706	0.566	80	53-118
1,2-Dichlorobenzene	0.679	0.564	83	52-121
1,2,4-Trichlorobenzene	0.539	0.424	79	41-134
Naphthalene	0.679	0.595	88	29-150

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Table 2.2 Results of the Duplicate Analysis for VOC in Air
 WA# SERAS-130 Cabo Rojo Site

Page 1 of 1

Sample ID: 0-130-1191

Analyte	Initial Analysis ppbv	Duplicate Analysis ppbv	RPD	QC Limit RPD
Dichlorodifluoromethane (CFC 12)	0.390	0.377	3.4	≤25
Chloromethane	0.344	0.293	15.0	≤25
Vinyl Chloride	U	U	NC	≤25
Bromomethane	0.0125	0.0117	6.6	≤25
Chloroethane	0.0375	0.0371	1.1	≤25
Trichlorofluoromethane (CFC 11)	0.811	0.795	2.0	≤25
1,1-Dichloroethene (1,1-DCE)	U	U	NC	≤25
Dichloromethane (Methylene Chloride)	0.153	0.151	1.3	≤25
1,1,2-Trichlorotrifluoroethane	0.0594	0.0578	2.7	≤25
trans-1,2-Dichloroethene	U	U	NC	≤25
1,1-Dichloroethane (1,1-DCA)	U	U	NC	≤25
cis-1,2-Dichloroethene	U	U	NC	≤25
Chloroform	U	U	NC	≤25
1,2-Dichloroethane	U	U	NC	≤25
1,1,1-Trichloroethane (TCA)	U	U	NC	≤25
Benzene	0.224	0.223	0.4	≤25
Carbon Tetrachloride	0.0702	0.0683	2.7	≤25
1,2-Dichloropropane	U	U	NC	≤25
Bromodichloromethane	U	U	NC	≤25
Trichloroethene (TCE)	U	U	NC	≤25
cis-1,3-Dichloropropene	U	U	NC	≤25
trans-1,3-Dichloropropene	U	U	NC	≤25
1,1,2-Trichloroethane	U	U	NC	≤25
Toluene	0.979	0.972	0.7	≤25
1,2-Dibromoethane	U	U	NC	≤25
Tetrachloroethene	0.0100	0.00987	1.3	≤25
Chlorobenzene	U	U	NC	≤25
Ethylbenzene	0.141	0.143	1.4	≤25
m,p-Xylenes	0.487	0.490	0.6	≤25
o-Xylene	0.211	0.214	1.4	≤25
1,1,2,2-Tetrachloroethane	U	U	NC	≤25
1,3-Dichlorobenzene	U	U	NC	≤25
1,4-Dichlorobenzene	0.0137	0.0146	6.4	≤25
1,2-Dichlorobenzene	U	U	NC	≤25
1,2,4-Trichlorobenzene	U	U	NC	≤25
Naphthalene	0.220	0.220	0	≤25

REPORT OF LABORATORY ANALYSIS

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 without the written consent of the ERT/SERAS Laboratory

Lockheed Martin
Scientific Engineering Response and Analytical Services
2890 Woodbridge Avenue Building 209
Edison, NJ 08837-3679
Telephone 732-321-4200 Facsimile 732-494-4021



Columbia Analytical Inc.
ALS Group
2655 Park Center Drive Suite A
Simi Valley, CA 93065
805-526-7161 x 234

Attn: Kate Aguilera

March 07, 2013

As per Lockheed Martin / SERAS purchase order 4100787240 for Project 0-130, please analyze samples according to the following parameters:

Analysis/Method	Matrix	number of samples
VOA/TO-15 extended list - See attached compound list	Summa	20

The samples are expected to arrive at your laboratory between March 25 and March 29, 2013. All applicable QA/QC (eg: BS/BSD, LCS, Duplicates, and Blanks) analysis as per method, will be performed on our sample matrix. Preliminary sample and QC result tables plus a signed copy of our Chain of Custody must be sent to SERAS 10 business days after each batch of samples. The complete data package is due 15 business days after receipt of samples. The complete data package must include all items on the deliverables checklist. The laboratory must provide documentation for individual summa canister and flow controller certification.

All sample and QC results must be summarized in a tab delimited file diskette deliverable. Units must be in ppbv and ug/m³ in the electronic deliverable.

The summa canisters and preset orifices must arrive at the hotel in Puerto Rico by March 15, 2013. The flow controllers should have 1/4 inch fittings.

Please submit all reports concerning this project to **Misty Barkley (732) 321-4205 or misty.barkley@lmco.com**. Any contractual questions, please call Marlon Perera at (301) 640-2851.

Sincerely,

Vinod Kansal
Analytical Support Chemist
Lockheed Martin / SERAS Project

cc. V. Kansal
R. Singhvi
P. Solinski

M. Perera
Subcontracting File

D. Killeen
J. Catanzarita

Method Reporting Limits (MRLs) assume a 1 L sample analysis volume (from 6L canister).

Actual reporting limits will be higher depending on the canister pressurization dilution factor and/or sample matrix effects. Typical canister pressurization dilution factors for 6L cans are between 1.5-2.0.

	Compound	MRL ug/m3	MRL ppbv
1	Dichlorodifluoromethane	0.025	0.005
2	Chloromethane	0.025	0.012
3	Vinyl Chloride	0.025	0.010
4	Bromomethane	0.025	0.006
5	Chloroethane	0.025	0.009
6	Freon-11	0.025	0.004
7	1,1-Dichloroethene	0.025	0.006
8	Methylene Chloride	0.1	0.029
9	Trichlorotrifluoroethane	0.025	0.003
10	trans-1,2-Dichloroethene	0.025	0.006
11	1,1-Dichloroethane	0.025	0.006
12	cis-1,2-Dichloroethene	0.025	0.006
13	Chloroform	0.1	0.020
14	1,2-Dichloroethane	0.025	0.006
15	1,1,1-Trichloroethane	0.025	0.005
16	Benzene	0.075	0.023
17	Carbon Tetrachloride	0.025	0.004
18	1,2-Dichloropropane	0.025	0.005
19	Bromodichloromethane	0.025	0.004
20	Trichloroethene	0.025	0.005
21	cis-1,3-Dichloropropene	0.025	0.006
22	trans-1,3-Dichloropropene	0.025	0.006
23	1,1,2-Trichloroethane	0.1	0.018
24	Toluene	0.1	0.027
25	1,2-Dibromoethane	0.025	0.003
26	Tetrachloroethene	0.025	0.004
27	Chlorobenzene	0.1	0.022
28	Ethylbenzene	0.1	0.023
29	m- & p-Xylene	0.1	0.023
30	o-Xylene	0.1	0.023
31	1,1,2,2-Tetrachloroethane	0.025	0.004
32	1,3-Dichlorobenzene	0.025	0.004
33	1,4-Dichlorobenzene	0.025	0.004
34	1,2-Dichlorobenzene	0.025	0.004
35	1,2,4-Trichlorobenzene	0.025	0.003
36	Naphthalene	0.1	0.019



Q130121A

No: 2-032113-152659-0029

Cooler #: 1

Lab: SERAS

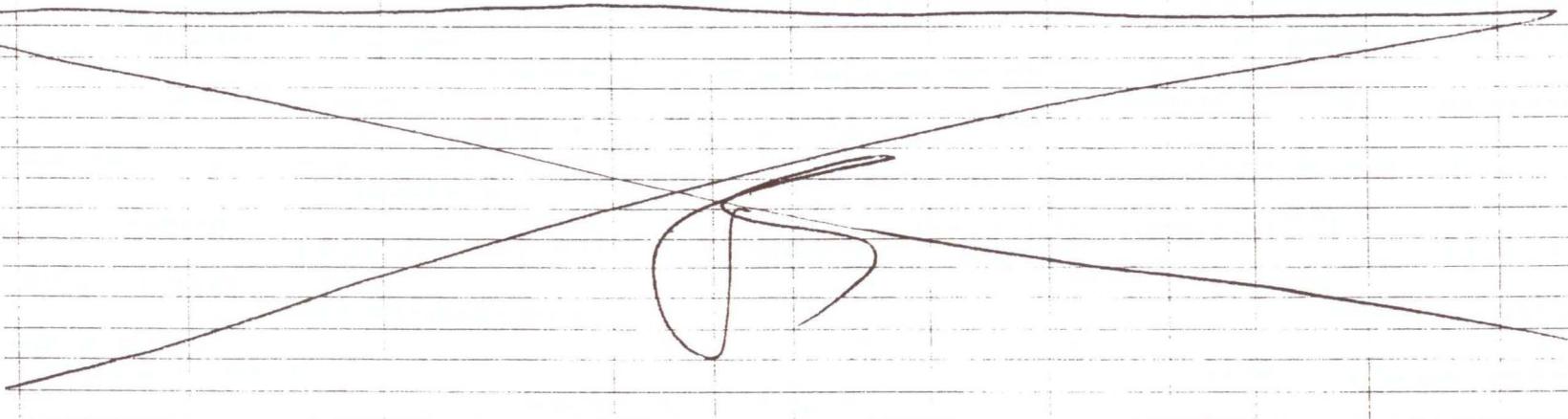
CHAIN OF CUSTODY RECORD

Cabo Rojo

Contact Name: Michael Cartwright

Contact Phone: 732-321-4284

Sample #	Location	Analyses	Matrix	Numb Cont	Container	Pump #	OrificeID	Start Pressu re	Stop_Dat	Stop_Time	Stop Pressu re
0-130-1177	EQP-IA5	TCE, PCE plus 34 SIM	Air	1	SUMMA	AS00407	FCA00365	-30	3/22/2013	10:23	-8
0-130-1178	EQP-SS6	TCE, PCE plus 34 SIM	Soil Gas	1	SUMMA	AS00416	FCA00742	-30	3/22/2013	10:23	-5
0-130-1179	EQP-SS1	TCE, PCE plus 34 SIM	Soil Gas	1	SUMMA	AS00427	FCA00757	-30	3/22/2013	10:26	-7
0-130-1180	EQP-IA1	TCE, PCE plus 34 SIM	Air	1	SUMMA	AC00095	FCA00751	-30	3/22/2013	10:26	-10.5



SAMPLES TRANSFERRED FROM

| Instructions: Analyze per contract with Lockheed Martin

CHAIN OF CUSTODY #



USEPA

CHAIN OF CUSTODY RECORD

Cabo Rojo

Contact Name: Michael Cartwright

Contact Phone: 732-321-4284

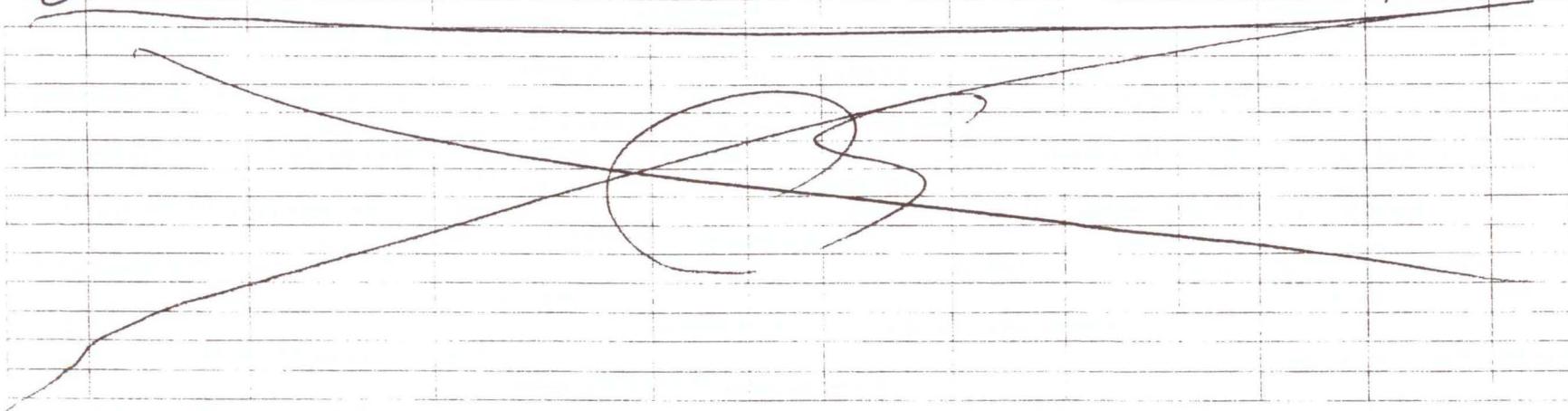
PBT 81301214

No: 2-032113-152834-0030

Cooler #: 1

Lab: SERAS

Lab #	Sample #	Location	Analyses	Matrix	Numb Cont	Container	Pump #	OrificeID	Start Pressu re	Stop_Dat e	Stop_Time	Stop Pressu re
(3)	0-130-1181	EQP-IA4	TCE, PCE plus 34 SIM	Air	1	SUMMA	AC01445	FCA00702	-30	3/22/2013	1006	-8.5 -353
(4)	0-130-1182	EQP-Amb4	TCE, PCE plus 34 SIM	Air	1	SUMMA	AC00945	FCA00755	-30	3/22/2013	1009	-8.5 -344
(5)	0-130-1183	SRHS-SS1	TCE, PCE plus 34 SIM	Soil Gas	1	SUMMA	AS00322	FCA00696	-30	3/22/2013	1030	-28 -13.04
(6)	0-130-1184	SRHS-SS2	TCE, PCE plus 34 SIM	Soil Gas	1	SUMMA	AC00718	FCA00663	-30	3/22/2013	1031	-8 -3.61



SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

Special Instructions: Analyze per contract with Lockheed Martin

023



USEPA

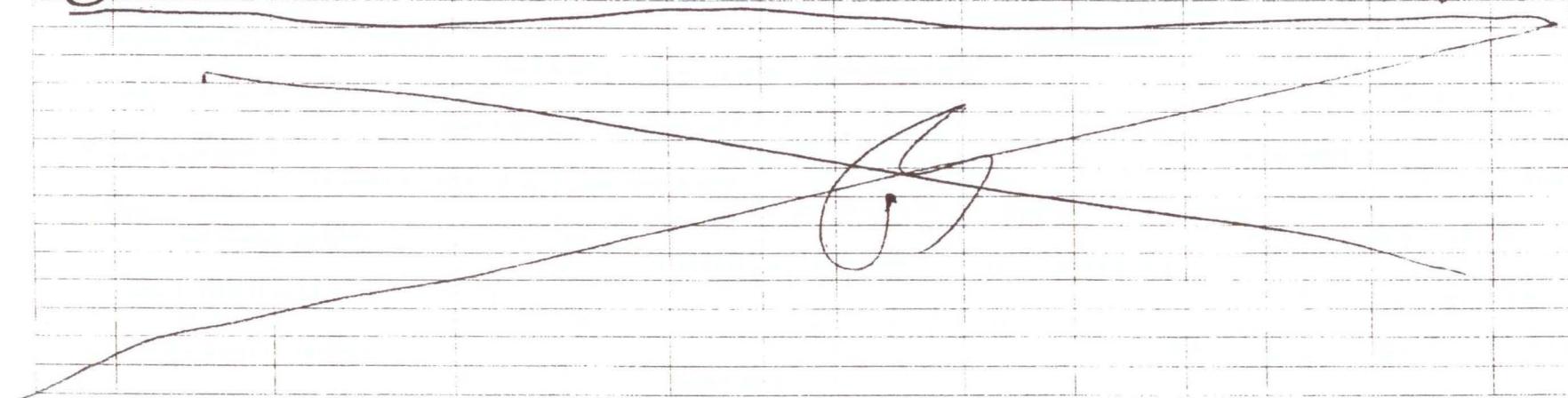
CHAIN OF CUSTODY RECORD

Cabo Rojo
Contact Name: Michael Cartwright
Contact Phone: 732-321-4284

P1301219
No: 2-032113-152904-0031

Cooler #: 1
Lab: SERAS

Lab #	Sample #	Location	Analyses	Matrix	Numb Cont	Container	Pump #	OrificeID	Start Pressu re	Stop_Dat	Stop_Time	Stop Pressu re
⑤	0-130-1185	SRHS-IA1	TCE, PCE plus 34 SIM	Air	1	SUMMA	AC01204	FCA00535	-30	3/22/2013	1031	-11 -4.4
⑥	0-130-1186	SRHS-IA2	TCE, PCE plus 34 SIM	Air	1	SUMMA	AS00233	FCA00623	-30	3/22/2013	1031	-10 -4.0
⑦	0-130-1187	SRHS-Amb	TCE, PCE plus 34 SIM	Air	1	SUMMA	AS00312	FCA00754	-30	3/22/2013	1035	-10 -4.0
⑧	0-130-1188	RC-CS1	TCE, PCE plus 34 SIM	Air	1	SUMMA	AC00817	FCA00744	-30	3/22/2013	1038	-10 -3.8



**SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #**

Special Instructions: Analyze per contract with Lockheed Martin

024



USEPA

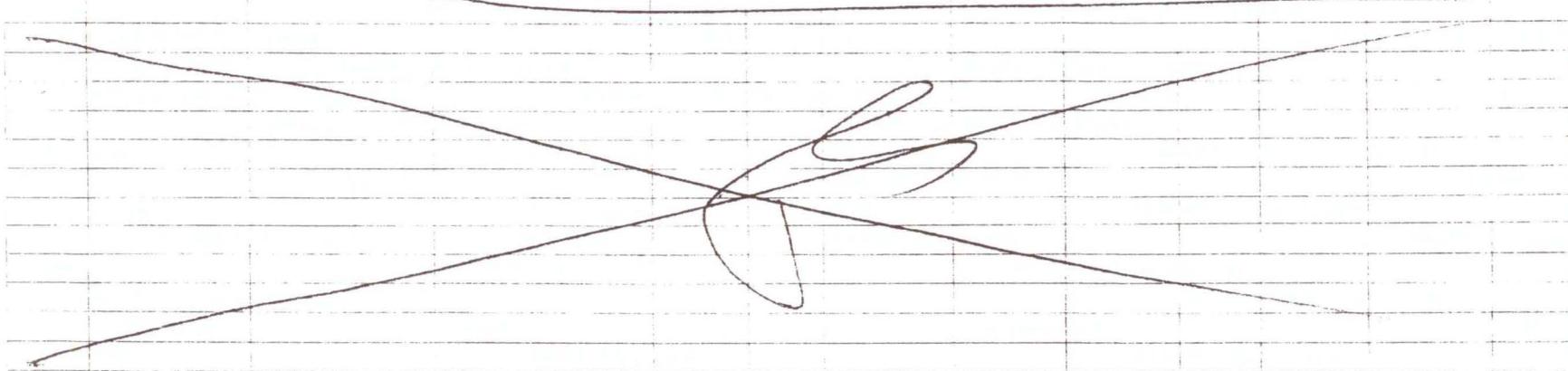
CHAIN OF CUSTODY RECORD

Cabo Rojo
Contact Name: Michael Cartwright
Contact Phone: 732-321-4284

P130124Q
No: 2-032113-152935-0032

Cooler #: 1
Lab: SERAS

Lab #	Sample #	Location	Analyses	Matrix	Numb Cont	Container	Pump #	OrificeID	Start Pressu re	Stop_Dat e	Stop_Time	Stop Pressu re
(13)	0-130-1189	RC-IA1	TCE, PCE plus 34 SIM	Air	1	SUMMA	AC01656	FCA00549	-30	3/22/2013	1058 +25	-10.67
(17)	0-130-1190	RC-CS2	TCE, PCE plus 34 SIM	Air	1	SUMMA	AC00116	FCA00246	-30	3/22/2013	1058 -10	-4.04
(15)	0-130-1191	RC-CS3	TCE, PCE plus 34 SIM	Air	1	SUMMA	AC00664	FCA00703	-30	3/22/2013	1058 -10	-4.10
(16)	0-130-1192	Trip Blank	TCE, PCE plus 34 SIM	Air	1	SUMMA			-30	3/22/2013	1115 -32	-12.43



SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
ANALYSIS	PRL	3/22/13	WILLIAMS	3/26/13	115						

025

APPENDIX B
SERAS Air Sampling Worksheets
Cabo Rojo Site
Cabo Rojo, PR
May 2013



EPA/Environmental Response Team
Scientific, Engineering, Response and Analytical Services
Lockheed Martin Corp., Edison, NJ
U.S. EPA Contract No. EP-W-09-031

Page 1 of 2



SUMMA Sampling Work Sheet

Site: CABO ROSS

WA# 130

Sampler: ADAMS/SOLINSKI

U.S. EPA/ERT WAM: CATANZARITA

Date Start: 3/21/13

Date Stop: 3/22/13

SERAS Task Leader: SOLINSKI

Sample #	Location	Sub-Location	Matrix	Summa #	Orifice ID	Analysis/Method	Start Pressure	Flow Rate (Start)	Time/(Start)	Time/(Stop)	End Pressure
0-130-1177	EOP	1A5	A	A500007	FCA 00365	TO-15 ALS 36 Cmpd SIM List	-30	-3.2	1021	1003	-9
1178	EOP	SS6	5G	A5 00 416	FCA 00 742	TO-15 ALS 36 Cmpd SIM List	-30	-3.4	1022	1003	-5
1179	EOP	SS1	5H	A5 00 427	FCA 00 757	TO-15 ALS 36 Cmpd SIM List	-30	-3.1	1026	1006	-7
1180	EOP	1A1	A	A6 00 95	FCA 00 751	TO-15 ALS 36 Cmpd SIM List	-30	-2.9	1027	1006	-10.5
1181	EOP	1B4	A	A6 00 1445	FCA 00 702	TO-15 ALS 36 Cmpd SIM List	-30	-3.4	1029	1006	-8.5
1182	EOP	AMB4	A	A6 00 945	FCA 00 755	TO-15 ALS 36 Cmpd SIM List	-30	-3.2	1031	1009	-8.5
1183	S2HS	SS1		A5 00 322	FCA 00 696	TO-15 ALS 36 Cmpd SIM List	-30	-3.3	1123	1020	-28
1184		SS2		A6 00 718	FCA 00 603	TO-15 ALS 36 Cmpd SIM List	-30	-3.2	1123	1031	-8
1185		1A	A6 G	A6 00 1204	FCA 00 535	TO-15 ALS 36 Cmpd SIM List	-30	-3.0	1124	1031	-11
1186		1A2	A	A6 00 233	FCA 00 693	TO-15 ALS 36 Cmpd SIM List	-30	-3.2	1124	1031	-10

MET Station on Site?: Y/N

Flow meter:

EOP CLOSED BCDR CIRCULATING AC WINDOWS CLOSED
 SRS " " " "
 LAT 18 4.965 N LONG 67° 876 W (1) WATER IN PORT



EPA/Environmental Response Team
Scientific, Engineering, Response and Analytical Services
Lockheed Martin Corp., Edison, NJ
U.S. EPA Contract No. EP-W-09-031

Page 2 of 2



SUMMA Sampling Work Sheet

Site: CABO ROSS

WA# 130

Sampler: ADAMS / SOLINSKI

U.S. EPA/ERT WAM: CATANZARITA

Date Start: 3/21/13 Date Stop: 3/22/13

SERAS Task Leader: SOLINSKI

Sample # <u>O-930</u>	Location	Sub-Location	Matrix	Summa #	Orifice ID	Analysis/ Method	Start Pressure	Flow Rate (Start)	Time/(Start)	Time/(Stop)	End Pressure
1187	SRH3	AMB		AS 00 312	FCA 00 754	TO-15 ALS 36 Cmpd SIM List	-30	-3.3	1126	1035	-10
1188	RL HS (1)	CS1		AC 817 00	FCA 7614	TO-15 ALS 36 Cmpd SIM List	-30	-3.2	1155	1058	-10
1189	RL	IA1		AC 0 1056	FCA 00 549	TO-15 ALS 36 Cmpd SIM List	-30	-5.1	1155	1058	-25
1190	RL	CS2		AC 00 116	FCA 00246	TO-15 ALS 36 Cmpd SIM List	-30	-3.1	1202	1058	-10
1191	RL	CS3		AC 00 664	FCA 00703	TO-15 ALS 36 Cmpd SIM List	-30	-3.2	1202	1058	-10
1192	TRIOPLANE	TROP		11 00 660	—	TO-15 ALS 36 Cmpd SIM List	-30	—	1115	1115	-30
						TO-15 ALS 36 Cmpd SIM List					
						TO-15 ALS 36 Cmpd SIM List					
						TO-15 ALS 36 Cmpd SIM List					
						TO-15 ALS 36 Cmpd SIM List					

MET Station on Site?: Y/N

Flow meter: #5

SRH3 SANTA CATARINA HEAD STREET

RC MS CAT 18°4.744' N
WONH 67° 8.829' W

(1) UNDER CONSTRUCTION AND OPEN TO AMBIENT AIR

APPENDIX C
Confidential Unit to Address Key
Cabo Rojo Site
Cabo Rojo, PR
May 2013

APPENDIX C
 Confidential Unit to Address Key
 Cabo Rojo Site
 Cabo Rojo, PR
 May 2013

Location	Sample Number	Sub_Location	Remarks
EQP-IA5	0-130-1177	Santa Maria Head Start N Rm IA	Windows Closed - Middle of North Classroom IA
EQP-SS6	0-130-1178	Santa Maria Head Start N Rm SS	Windows Closed - Middle of North Classroom SS
EQP-SS1	0-130-1179	Santa Maria Head Start S Rm SS	Windows Closed - South East Office SS
EQP-IA1	0-130-1180	Santa Maria Head Start S Rm IA	Windows Closed - South Classroom in Middle IA
EQP-IA4	0-130-1181	Santa Maria Head Start M Rm IA	Windows Closed - Middle Class Room IA
EQP-Amb4	0-130-1182	Santa Maria Head Start E Porch Ambient	Windows Closed - East Porch Ambient in Back
SRHS-SS1	0-130-1183	Santa Rita Head Start Kitchen	Windows Closed - Kitchen SS
SRHS-SS2	0-130-1184	Santa Rita Head Start Middle of Big Room	Windows Closed - Classroom in Middle SS
SRHS-IA1	0-130-1185	Santa Rita Head Start Middle of Big Room	Windows Closed - Classroom in Middle IA1
SRHS-IA2	0-130-1186	Santa Rita Head Start Middle of Big Room	Windows Closed - Classroom in Middle IA2
SRHS-Amb	0-130-1187	Santa Rita Head Start Back play area	Outside fenced area in Back
RC-CS1	0-130-1188	Building by Stadium - Entry	Open Crawl Space Entry Area under construction
RC-IA1	0-130-1189	Building by Stadium - Entry	Open Indoor Air Entry Area under construction
RC-CS2	0-130-1190	Building by Stadium - Back	Open Crawl Space Back Area under construction
RC-CS3	0-130-1191	Building by Stadium - Right	Open Crawl Space Right Area under construction
Trip Blank	0-130-1192	Trip Blank	Trip Blank